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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,819	04/13/2006	Seong-Young Lee	AB-1867 US	5258

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MACPHERSON KWOK CHEN & HEID LLP  
2033 GATEWAY PLACE  
SUITE 400  
SAN JOSE, CA 95110

EXAMINER
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SALERNO, SARAH KATE

ART UNIT	PAPER NUMBER
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2814

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09/17/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/575,819	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> Sarah K. Salerno	<b>Art Unit</b> 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16-22 and 24-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16-22 and 24-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/03/07</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

1. Applicant's amendment/arguments filed on 07/03/07 as being acknowledged and entered. By this amendment claims 15 & 23 are canceled, no claims have been added and claims 1-14, 16-22 and 24-25 are pending.

### ***Claim Objections***

2. Claims 24 & 25 are objected to because of the following informalities: Claims 24 & 25 is dependent on claim 23, which has been cancelled. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6, 9-10, 16-17, 19-20 & 24-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubo et al. (US Patent 6,091,467).

Claim 1: Kubo teaches a thin film transistor comprising (FIG. 13): a gate electrode (201); a gate insulating layer (202) formed on the gate electrode (201); a semiconductor layer (203-205) formed on the gate insulating layer (202) and disposed opposite the gate electrode (201); a source electrode (206) and a drain electrode (207)

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that are formed at least in part on the semiconductor layer (203-205) and face each other; a passivation layer (208) formed on the source electrode (206), the drain electrode (207), and a portion of the semiconductor layer (203-205) that is not covered with the source electrode (206) and the drain electrode (207); and a shielding electrode (210) formed on the passivation layer (208) and disposed on a region between the source electrode (206) and the drain electrode (207).

Claim 6: Kubo teaches the shielding electrode comprises IZO or ITO (Col. 11 lines 13-25)

Claim 9: Kubo teaches a thin film transistor array panel comprising: a gate line and a data tie line; a first thin film transistor including a control electrode, an input electrode, an output electrode, and a channel portion disposed between the input electrode and the output electrode and generating a gate signal to be applied to the gate line; a second thin film transistor including a gate electrode connected to the gate line, a source electrode connected to the data line, a drain electrode, and a channel portion disposed between the source electrode and the drain electrode and transmitting a data signal from the data line in response to the gate signal from the gate line; a pixel electrode connected to the drain electrode to receive the data signal; and a first shielding electrode disposed on the channel portion of the first thin film transistor wherein the first shielding electrode is formed of the same layer as the pixel electrode (Description of the Related Art; Figs. 9-10, 12).

Claims 2 & 10: Kubo teaches the shielding electrode is electrically isolated (FIG. 13).

Claim 16: Kubo teaches a second shielding electrode disposed on the channel portions of the second thin film transistor and including the same layer as the pixel electrode (Description of the Related Art; Figs. 9-10, 12).

Claim 17: Kubo teaches an insulating layer disposed between the first and the second thin film transistors and the first and the second shielding electrodes (Description of the Related Art; Figs. 9-10, 12).

Claim 19: Kubo teaches a display device comprising: a gate line and a data line; a first thin film transistor including a channel portion and generating a gate signal to be applied to the gate line; a second thin film transistor transmitting a data signal from the data line in response to the gate signal from the gate line; a pixel electrode connected to the second thin film transistor to receive the data signal; a shielding electrode disposed on the channel portion of the first thin film transistor wherein the shielding electrode is formed of the same layer as the pixel electrode; and a common electrode facing the pixel electrode (Description of the Related Art; Figs. 9-10, 12).

Claim 20: Kubo teaches the shielding electrode faces, the common electrode (FIG. 12).

Claim 24: Kubo teaches a dielectric layer (216) disposed between the shielding electrode and the common electrode (FIG. 12).

Claim 25: Kubo teaches the dielectric layer (216) comprises a liquid crystal layer (col. 2 lines 10-20).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5, 11-14 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (US Patent 6,091,467) in view of Kubota et al. (JP Pub # 10-098190).

Regarding claims 3 & 11, as described above, Kubo substantially reads on the invention as claimed, except Kubo does not teach the shielding electrode is supplied with a predetermined voltage. Kubota teaches a shielding electrode is supplied with a predetermined voltage to prevent the accumulation of electric charge on the light-shield film [0018, 0039]. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device taught by Kubo to supply the shielding electrode with a predetermined voltage to prevent the accumulation of electric charge on the light-shield film as taught by Kubota [0018,0039].

Claims 4 & 12: Kubota teaches the predetermined voltage supplied to the shielding electrode is equal to or lower than a ground voltage [0039].

Claims 5 & 13: Kubota teaches the predetermined voltage supplied to the shielding electrode is a negative voltage [0039].

Claims 14 & 22: Kubota teaches the predetermined voltage supplied to the first shielding electrode has a magnitude for turning of the second thin film transistor [0004, 0013, 0018-0019, 0022, 0050-0059].

Claim 21: Kubota teaches the shielding electrode is supplied with a predetermined voltage lower than a voltage applied to the common electrode [0004, 0013, 0018-0019, 0022, 0050-0059].

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda (US PGPub 2001/003023) as applied to claim 1 above, and further in view of Tsubo (US PGPub 2002/0057396)

Regarding claim 7, as described above, Ikeda substantially reads on the invention as claimed, except Ikeda does not teach the shielding electrode has a shape of horseshoes. Tsubo teaches a U-shape shielding electrode which reduces the variance in parasitic capacitance of the device [0061, 0072]. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the shield electrode taught by Ikeda to be a U-shape to increase the performance of the device as taught by Tsubo [0061, 0072].

8. Claims 8 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo et al. (US Patent 6,091,467) as evidenced by Kawasaki et al. (US Patent 6,281,552) (col. 8 lines 44-50).

Claims 8 & 18: Kubo teaches the passivation layer (108/208) comprises an acrylic resin which is said to be an organic insulator (Col. 1 lines 60-67) as evidenced by Kawasaki (col. 8 lines 44-50).

### ***Response to Arguments***

9. Applicant's arguments, see Applicants Remarks/Arguments, filed 07/03/07, with respect to the rejection(s) of claim(s) 1-25 under 102/103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kubo et al. (US Patent 6,091,467).

Applicant states in his arguments that he has amended claims 9 and 19 by amending the claims to recite the limitation "the first shielding electrode comprises the same layer as the pixel electrode" however this does not match the claim language currently present in the Amendments to the Claims submitted on 07/03/07.



***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah K. Salerno whose telephone number is (571) 270-1266. The examiner can normally be reached on M-R 7:30-5:00pm every other F 7:30-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. K. S./

/Theresa T. Doan/  
Primary Examiner, Art Unit 2814